Access DB# 77725

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: _____ Examiner # : _____ Date: _____
Art Unit: _____ Phone Number 30 _____ Serial Number: _____
Mail Box and Bldg/Room Location: _____ Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: _____

Inventors (please provide full names): _____

_____

Earliest Priority Filing Date: _____

***For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.**

Jan Delaval
Reference Librarian
Biotechnology & Chemical Library
CM1 1E07 – 703-308-4498
jan.delaval@uspto.gov

****

STAFF USE ONLY

Searcher: Jan
Searcher Phone #: 4498
Searcher Location: _____
Date Searcher Picked Up: 10/10/02
Date Completed: 10/11/02
Searcher Prep & Review Time: _____
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Online Time: + 90

Type of Search

NA Sequence (#) _____
AA Sequence (#) ✓
Structure (#) _____
Bibliographic _____
Litigation _____
Fulltext _____
Patent Family _____
Other _____

Vendors and cost where applicable

STN ✓
Dialog _____
Questel/Orbit _____
Dr.Link _____
Lexis/Nexis _____
Sequence Systems ✓
WWW/Internet _____
Other (specify) _____

PTO-1590 (8-01)

Manual of Patent Examining Procedure, Section 713.04 Substance of Interview must Be Made of Record

A complete written statement as to the substance of any face-to-face or telephone interview with regard to an application must be made of record in the application, whether or not an agreement with the examiner was reached at the interview.

§1.133 Interviews

* * * * *

(b) In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for response to Office action as specified in §§ 1.111,1.135. (35 U.S.C.132)

§ 1.2. Business to be transacted in writing. All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete a two-sheet carbon interleaf Interview Summary Form for each interview held after January 1, 1978 where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks in neat handwritten form using a ball point pen. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview-recordation procedures below.

The Interview Summary Form shall be given an appropriate paper number, placed in the right-hand portion of the file, and listed on the "Contents" list on the file wrapper. The docket and serial register cards need not be updated to reflect interviews. In a personal interview, the duplicate copy of the Form is removed and given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephonic interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the telephonic interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Serial Number of the application
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (personal or telephonic)
- Name of participant(s)) (applicant, attorney or agent, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the claims discussed
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). (Agreements as to allowability are tentative and do not restrict further action by the examiner to the contrary.)
- The signature of the examiner who conducted the interview
- Names of other Patent and Trademark Office personnel present.

The Form also contains a statement reminding the applicant of his responsibility to record the substance of the interview.

It is desireable that the examiner orally remind the applicant of his obligation to record the substance of the interview in each case unless both applicant and examiner agree that the examiner will record same. Where the examiner agrees to record the substance of the interview, or when it is adequately recorded on the Form or in an attachment to the Form, the examiner should check a box at the bottom of the Form informing the applicant that he need not supplement the Form by submitting a separate record of the substance of the interview.

It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

1) A brief description of the nature of any exhibit shown or any demonstration conducted,
2) an identification of the claims discussed,
3) an identification of specific prior art discussed,
4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the examiner,
5) a brief identification of the general thrust of the principal arguments presented to the examiner. The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he feels were or might be persuasive to the examiner,
6) a general indication of any other pertinent matters discussed, and
7) if appropriate, the general results or outcome of the interview unless already described in the Interview Stimmary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete or accurate, the examiner will give the applicant one month from the date of the notifying letter or the remainder of any period for response, whichever is longer, to complete the response and thereby avoid abandonment of the application (37 CFR 1.135(c)).

Examiner to Check for Accuracy

Applicant's summary of what took place at the interview should be carefully checked to determine the accuracy of any argument or statement attributed to the examiner during the interview. If there is an inaccuracy and it bears directly on the question of patentability, it should be pointed out in the next Office letter. If the claims are allowable for other reasons of record, the examiner should send a letter setting forth his or her version of the statement attributed to him. If the record is complete and accurate, the examiner should place the indication "Interview record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

PRIMARY EXAMINER
.ORAINE SPECTOR

*U.S. GPO: 1997-422-310/60005

; Sequence 3, Application US/09813398
; GENERAL INFORMATION:
; APPLICANT: Bruce D. Weintraub
; APPLICANT: Mariusz W. Szkudlinski
; APPLICANT: University of Maryland
; TITLE OF INVENTION: CYSTINE KNOT GROWTH FACTOR MUTANTS
; FILE REFERENCE: UOFMD.003C1
; CURRENT APPLICATION NUMBER: US/09/813,398
; CURRENT FILING DATE: 2001-03-20
; PRIOR APPLICATION NUMBER: PCT/US99/05908
; PRIOR FILING DATE: 1999-03-19
; PRIOR APPLICATION NUMBER: PCT/US98/19772
; PRIOR FILING DATE: 1998-09-22
; NUMBER OF SEQ ID NOS: 41
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 3
; LENGTH: 141
; TYPE: PRT
; ORGANISM: HOMO SAPIEN
US-09-813-398-3
PSKEPLRPRCRPINATLAVEKEGCPVCITVNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFESIRL
PGCPRGVNPVVSYAVALSCQCALCRRSTTDCGGPKDHPLTCDDPRFQDSSSSKAPPPSLPSPSRLPGPSD
T1

```
=> fil reg
FILE 'REGISTRY' ENTERED AT 16:59:01 ON 11 OCT 2002
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PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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Jan Delaval
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Biotechnology & Chemical Library
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jan.delaval@uspto.gov

```
Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:   10 OCT 2002  HIGHEST RN 460706-73-4
DICTIONARY FILE UPDATES:  10 OCT 2002  HIGHEST RN 460706-73-4

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

Crossover limits have been increased.  See HELP CROSSOVER for details.

Experimental and calculated property data are now available.  See HELP
PROPERTIES for more information.  See STNote 27, Searching Properties
in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> d que
L19             0 SEA FILE=REGISTRY ABB=ON  PLU=ON  PSKEPLRPRCRPINATLAVEKEGCPVCIT
                  VNTTICAGYCPTMTRVLQGVLPALPQVVCNYRDVRFESIRLPGCPRGVNPVVSYAVALSCQCA
                  LCRRSTTDCGGPKDHPLTCDDPRFQDSSSSKAPPPSLPSPSRLPGPSDT/SQSP


=> d que l20
L20             0 SEA FILE=REGISTRY ABB=ON  PLU=ON  PSKEPLRPRCRPINATLAVEKEGCPVCIT
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=> d que l21
L21            10 SEA FILE=REGISTRY ABB=ON  PLU=ON  ..........................
                  ........YCPTMTRVLQGVLPALPQVV..............................SCQCA
                  LCRRSTTDCGGPKDHPLTCDDPRFQDSSSSKAPPPSLPSPSRLPGPSDT/SQSP


=> d his l21-

     (FILE 'REGISTRY' ENTERED AT 16:59:01 ON 11 OCT 2002)
L21            10 S ..................................YCPTMTRVLQGVLPALPQVV....
                  SAV L21 SPECTOR813/A

     FILE 'HCAPLUS' ENTERED AT 17:05:20 ON 11 OCT 2002
L22            16 S L21
L23             0 S L22 AND (WEINTRAUB B? OR SZKUDLINSKI M?)/AU
L24             1 S WO99-US5908/AP,PRN
L25             0 S L22 AND L24
L26            11 S L22 AND (PY<=1997 OR PRY<=1997 OR AY<=1997)
                  SEL HIT RN

     FILE 'REGISTRY' ENTERED AT 17:08:32 ON 11 OCT 2002
L27             7 S E1-E7
L28             7 S L27 AND L21

=> d sqide can tot l28

L28  ANSWER 1 OF 7  REGISTRY  COPYRIGHT 2002 ACS
```

RN **342059-46-5** REGISTRY
CN 36: PN: US6238890 SEQID: 36 unclaimed protein (9CI) (CA INDEX NAME)
FS PROTEIN SEQUENCE
SQL 181

PATENT ANNOTATIONS (PNTE):

Sequence Source	Patent Reference
Not Given	US6238890 unclaimed SEQID 36

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SEQ      1 MEMFQGLLLL LLLSMGGTWA SKEPLRPRCR PIQATLAVEK EGCPVCITVN
                             = ========== ========== ==========
        51 TTICAGYCPT MTRVLQGVLP ALPQVVCNYR DVRFESIRLP GCPRGVNPVV
           ========== ========== ========== ========== ==========
       101 SYAVALSCQC ALCRRSTTDC GGPKDHPLTC DDPRFQDSSS SKAPPPSLPS
           ========== ========== ========== ========== ==========
       151 PSRLPGPSDT PILPQGSGSG SGSAPDVQDC P
           ==========
```

HITS AT: 20-160
MF Unspecified
CI MAN
SR CA
LC STN Files: CA, CAPLUS, USPATFULL
1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 135:1276

L28 ANSWER 2 OF 7 REGISTRY COPYRIGHT 2002 ACS
RN **342058-80-4** REGISTRY
CN 1-145-Gonadotropin, chorionic deriv. (human subunit .beta.) fusion protein with peptide fusion protein with 1-92-chorionic gonadotropin deriv. (human subunit .alpha.) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 39: PN: US6238890 SEQID: 39 claimed protein
FS PROTEIN SEQUENCE
SQL 265

PATENT ANNOTATIONS (PNTE):

Sequence Source	Patent Reference
Not Given	US6238890 claimed SEQID 39

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SEQ      1 MEMFQGLLLL LLLSMGGTWA SKEPLRPRCR PINATLAVEK EGCPVCITVN
                             = ========== ========== ==========
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           ========== ========== ========== ========== ==========
       101 SYAVALSCQC ALCRRSTTDC GGPKDHPLTC DDPRFQDSSS SKAPPPSLPS
           ========== ========== ========== ========== ==========
       151 PSRLPGPSDT PILPQGSGSG SGSAPDVQDC PECTLQENPF FSQPGAPILQ
           ==========
       201 CMGCCFSRAY PTPLRSKKTM LVQKQVTSES TCCVAKSYNR VTVMGGFKVE
       251 QHTACHCSTC YYHKS
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HITS AT: 20-160
MF Unspecified

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CI   MAN
SR   CA
LC   STN Files:   CA, CAPLUS, USPATFULL
               1 REFERENCES IN FILE CA (1962 TO DATE)
               1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE   1:  135:1276

L28  ANSWER 3 OF 7  REGISTRY  COPYRIGHT 2002 ACS
RN   342058-60-0  REGISTRY
CN   1-145-Gonadotropin, chorionic (human subunit .beta.) fusion protein with
     peptide fusion protein with 1-92-chorionic gonadotropin (human subunit
     .alpha.) (9CI)  (CA INDEX NAME)
OTHER NAMES:
CN   3: PN: US6238890 SEQID: 3 claimed protein
FS   PROTEIN SEQUENCE
SQL  265

PATENT ANNOTATIONS (PNTE):
Sequence |Patent
Source   |Reference
=========+==========
Not Given|US6238890
         |claimed
         |SEQID 3


SEQ      1 MEMFQGLLLL LLLSMGGTWA SKEPLRPRCR PINATLAVEK EGCPVCITVN
                             = ========== ========== ==========
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           ========== ========== ========== ========== ==========
       101 SYAVALSCQC ALCRRSTTDC GGPKDHPLTC DDPRFQDSSS SKAPPPSLPS
           ========== ========== ========== ========== ==========
       151 PSRLPGPSDT PILPQGSGSG SGSAPDVQDC PECTLQENPF FSQPGAPILQ
           ==========
       201 CMGCCFSRAY PTPLRSKKTM LVQKNVTSES TCCVAKSYNR VTVMGGFKVE
       251 NHTACHCSTC YYHKS
HITS AT:   20-160
MF   Unspecified
CI   MAN
SR   CA
LC   STN Files:   CA, CAPLUS, USPATFULL
               1 REFERENCES IN FILE CA (1962 TO DATE)
               1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE   1:  135:1276

L28  ANSWER 4 OF 7  REGISTRY  COPYRIGHT 2002 ACS
RN   202016-40-8  REGISTRY
CN   Gonadotropin, chorionic (human .beta.-subunit precursor) (9CI)  (CA INDEX
     NAME)
OTHER NAMES:
CN   2: PN: US6319504 SEQID: 2 unclaimed protein
CN   Chorionic gonadotropin (human .beta.-subuint precursor)
CN   Chorionic gonadotropin (human .beta.-subunit precursor)
FS   PROTEIN SEQUENCE
SQL  165

PATENT ANNOTATIONS (PNTE):
Sequence |Patent
Source   |Reference
=========+==========
Not Given|US6319504
```

|unclaimed
|SEQID 2

```
SEQ      1 MEMFQGLLLL LLLSMGGTWA SKEPLRPRCR PINATLAVEK EGCPVCITVN
                           = ========== ========== ==========
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           ========== ========== ========== ========== ==========
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           ========== ========== ========== ========== ==========
       151 PSRLPGPSDT PILPQ
           ==========
```

HITS AT: 20-160
MF Unspecified
CI MAN
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
6 REFERENCES IN FILE CA (1962 TO DATE)
3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
6 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 136:1103

REFERENCE 2: 134:4040

REFERENCE 3: 133:134164

REFERENCE 4: 131:295923

REFERENCE 5: 128:124125

REFERENCE 6: 128:124124

L28 ANSWER 5 OF 7 REGISTRY COPYRIGHT 2002 ACS
RN **195460-74-3** REGISTRY
CN 20-190-Tumor necrosis factor receptor p55 (human clone D.alpha.-TBP190hCG.beta.) fusion protein with peptide (synthetic linker) fusion protein with chorionic gonadotropin (human .beta.-subunit fragment) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 8: PN: US6194177 SEQID: 8 claimed protein
FS PROTEIN SEQUENCE
SQL 336

PATENT ANNOTATIONS (PNTE):

Sequence Source	Patent Reference
Not Given	US6194177 claimed SEQID 8

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SEQ      1 SRTSLLLAFG LLCLPWLQEG SADSVCPQGK YIHPQNNSIC CTKCHKGTYL
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       101 VDRDTVCGCR KNQYRHYWSE NLFQCFNCSL CLNGTVHLSC QEKQNTVCTC
       151 HAGFFLRENE CVSCSNCKKS LECTKLCLPQ IENVKGTEDS GTTAGAGPRC
                                                   ==========
       201 RPINATLAVE KEGCPVCITV NTTICAGYCP TMTRVLQGVL PALPQVVCNY
           ========== ========== ========== ========== ==========
       251 RDVRFESIRL PGCPRGVNPV VSYAVALSCQ CALCRRSTTD CGGPKDHPLT
           ========== ========== ========== ========== ==========
       301 CDDPRFQDSS SSKAPPPSLP SPSRLPGPSD TPILPQ
```

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           ========== ========== ========== =
HITS AT:   191-331
MF   Unspecified
CI   MAN
SR   CA
LC   STN Files:   CA, CAPLUS, TOXCENTER, USPATFULL
               2 REFERENCES IN FILE CA (1962 TO DATE)
               2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE   1:  134:188974

REFERENCE   2:  127:244008

L28  ANSWER 6 OF 7  REGISTRY  COPYRIGHT 2002 ACS
RN   195460-70-9  REGISTRY
CN   20-161-Tumor necrosis factor receptor p55 (human clone
     pSVL-hTBP1.hCG.beta.) fusion protein with peptide (synthetic linker)
     fusion protein with chorionic gonadotropin (human .beta.-subunit fragment)
     (9CI)  (CA INDEX NAME)
OTHER NAMES:
CN   4: PN: US6194177 SEQID: 4 claimed protein
FS   PROTEIN SEQUENCE
SQL  307

PATENT ANNOTATIONS (PNTE):
Sequence |Patent
Source   |Reference
=========+==========
Not Given|US6194177
         |claimed
         |SEQID 4


SEQ      1 SRTSLLLAFG LLCLPWLQEG SADSVCPQGK YIHPQNNSIC CTKCHKGTYL
        51 YNDCPGPGQD TDCRECESGS FTASENHLRH CLSCSKCRKE MGQVEISSCT
       101 VDRDTVCGCR KNQYRHYWSE NLFQCFNCSL CLNGTVHLSC QEKQNTVCTC
       151 HAGFFLRENE CVSCAGAGPR CRPINATLAV EKEGCPVCIT VNTTICAGYC
                    ========= ========== ========== ==========
       201 PTMTRVLQGV LPALPQVVCN YRDVRFESIR LPGCPRGVNP VVSYAVALSC
           ========== ========== ========== ========== ==========
       251 QCALCRRSTT DCGGPKDHPL TCDDPRFQDS SSSKAPPPSL PSPSRLPGPS
           ========== ========== ========== ========== ==========
       301 DTPILPQ
           ==
HITS AT:   162-302
MF   Unspecified
CI   MAN
SR   CA
LC   STN Files:   CA, CAPLUS, TOXCENTER, USPATFULL
               2 REFERENCES IN FILE CA (1962 TO DATE)
               2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE   1:  134:188974

REFERENCE   2:  127:244008

L28  ANSWER 7 OF 7  REGISTRY  COPYRIGHT 2002 ACS
RN   76050-53-8  REGISTRY
CN   Gonadotropin, chorionic pre- (human .beta.-subunit protein moiety reduced)
     (9CI)  (CA INDEX NAME)
OTHER NAMES:
CN   10: PN: WO0041717 FIGURE: 1A unclaimed protein
CN   Gonadotropin, chorionic (human embryo .beta.-subunit)
```

```
FS   PROTEIN SEQUENCE
SQL  165

PATENT ANNOTATIONS (PNTE):
Sequence |Patent
Source   |Reference
=========+============
Not Given|WO2000041717
         |unclaimed
         |FIGURE 1A


SEQ      1 MEMFQGLLLL LLLSMGGTWA SKEPLRPRCR PINATLAVEK EGCPVCITVN
                             = ========== ========== ==========
        51 TTICAGYCPT MTRVLQGVLP ALPQVVCNYR DVRFESIRLP GCPRGVNPVV
           ========== ========== ========== ========== ==========
       101 SYAVALSCQC ALCRRSTTDC GGPKDHPLTC DDPRFQDSSS SKAPPPSLPS
           ========== ========== ========== ========== ==========
       151 PSRLPGPSDT PILPQ
           ==========
HITS AT:   20-160

**RELATED SEQUENCES AVAILABLE WITH SEQLINK**
MF   Unspecified
CI   MAN
LC   STN Files:   CA, CAPLUS, TOXCENTER, USPATFULL
               6 REFERENCES IN FILE CA (1962 TO DATE)
               6 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE   1:  133:134164

REFERENCE   2:  132:246924

REFERENCE   3:  116:208630

REFERENCE   4:  100:97541

REFERENCE   5:  99:207297

REFERENCE   6:  94:11741


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FILE LAST UPDATED: 10 Oct 2002  (20021010/ED)

 This file contains CAS Registry Numbers for easy and accurate
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substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

=> d all tot l26

L26 ANSWER 1 OF 11 HCAPLUS COPYRIGHT 2002 ACS
AN 2001:843811 HCAPLUS
DN 136:1103
TI Treatment and prevention of HIV infection by administration of derivatives of human chorionic gonadotropin
IN Gallo, Robert C.; Bryant, Joseph; Lunardi-Iskandar, Yanto
PA University of Maryland Biotechnology Institute, USA
SO U.S., 51 pp., Cont.-in-part of U.S. Ser. No. 669,681, abandoned.
CODEN: USXXAM
DT Patent
LA English
IC ICM A61K039-00
NCL 424198100
CC 2-4 (Mammalian Hormones)
Section cross-reference(s): 63
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6319504	B1	20011120	US 1996-709948	19960909 <--
	WO 9749373	A2	19971231	WO 1997-US11202	19970624 <--
	WO 9749373	A3	19980226		
	W: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GE, GH, HU, IL, IS, JP, KG, KP, KR, KZ, LC, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, SL, TJ, TM, TR, TT, UA, US, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9738792	A1	19980114	AU 1997-38792	19970624 <--
	EP 939589	A2	19990908	EP 1997-936023	19970624 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
PRAI	US 1996-669681	B2	19960624 <--		
	US 1996-709948	A2	19960909 <--		
	WO 1997-US11202	W	19970624 <--		

AB The present invention relates to .beta.-hCG, particularly .beta.-hCG proteins having a sequence of amino acids 41-54, 45-54, 47-53, 45-57 and 45-58 and analogs and derivs. thereof. The invention further relates to methods of treatment and prevention of HIV infection by administration of a therapeutic compd. of the invention. The peptides of the invention can also be used to treat Kaposi's sarcoma and hemopoiesis dysfunction. Such therapeutic compds. include hCG, .beta.-hCG and .beta.-hCG peptides, analogs and derivs. of hCG, .beta.-hCG and .beta.-hCG peptides, and nucleic acids encoding hCG, .beta.-hCG and .beta.-hCG peptides. In a preferred embodiment, .beta.-hCG peptides, particularly .beta.-hCG peptides of amino acids 47-53, 45-57 or 45-58 are administered to a subject for treatment or prevention of HIV infection in that subject. The invention also provides methods for screening hCG prepns. for activity in treating or preventing HIV infection. Pharmaceutical compns. and methods of administration of therapeutics are also provided.
ST HIV infection treatment chorionic gonadotropin deriv; Kaposis sarcoma treatment chorionic gonadotropin deriv; hemopoiesis dysfunction treatment chorionic gonadotropin deriv
IT Sarcoma

(Kaposi's, inhibitors; treatment and prevention of HIV infection, Kaposi's sarcoma, and hemopoiesis dysfunction by administration of derivs. of human chorionic gonadotropin)

IT Hematopoiesis
(prohematopoietic effects; treatment and prevention of HIV infection, Kaposi's sarcoma, and hemopoiesis dysfunction by administration of derivs. of human chorionic gonadotropin)

IT Drug delivery systems
(treatment and prevention of HIV infection by administration of derivs. of human chorionic gonadotropin)

IT Chemokines
Macrophage inflammatory protein 1.alpha.
Macrophage inflammatory protein 1.beta.
RANTES (chemokine)
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(treatment and prevention of HIV infection by administration of derivs. of human chorionic gonadotropin in combination with a chemokine)

IT Gene therapy
(treatment and prevention of HIV infection by administration of nucleic acids encoding .beta.-hCG or .beta.-hCG peptides)

IT Anti-AIDS agents
(treatment and prevention of HIV infection, Kaposi's sarcoma, and hemopoiesis dysfunction by administration of derivs. of human chorionic gonadotropin)

IT 201351-22-6
RL: PRP (Properties)
(Unclaimed; treatment and prevention of HIV infection by administration of derivs. of human chorionic gonadotropin)

IT 7481-89-2, DdC 30516-87-1, AZT 69655-05-6, Didanosine 127779-20-8, Saquinavir 134678-17-4, 3TC
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(treatment and prevention of HIV infection by administration of derivs. of human chorionic gonadotropin in combination with another antiviral agent)

IT 108303-18-0 163007-06-5 201350-97-2 201351-01-1 201351-02-2
201351-03-3 201351-04-4 201351-05-5 201351-06-6 201351-07-7
201351-09-9 201351-13-5 201351-18-0 201351-19-1 201351-20-4
201351-21-5 201351-23-7 201351-24-8 201351-55-5 201492-48-0
201492-49-1 374728-54-8
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(treatment and prevention of HIV infection, Kaposi's sarcoma, and hemopoiesis dysfunction by administration of derivs. of human chorionic gonadotropin)

IT 202017-03-6
RL: PRP (Properties)
(unclaimed nucleotide sequence; treatment and prevention of HIV infection by administration of derivs. of human chorionic gonadotropin)

IT **202016-40-8** 375375-79-4
RL: PRP (Properties)
(unclaimed protein sequence; treatment and prevention of HIV infection by administration of derivs. of human chorionic gonadotropin)

RE.CNT 132 THERE ARE 132 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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L26 ANSWER 2 OF 11 HCAPLUS COPYRIGHT 2002 ACS
AN 2001:391986 HCAPLUS
DN 135:1276
TI Chimeric genes for single-chain forms of glycoprotein hormones and their expression in host cells
IN Biome, Irving; Moyle, William R.
PA Washington University, USA
SO U.S., 87 pp., Cont.-in-part of U.S. 853,524.
CODEN: USXXAM
DT Patent
LA English
IC C12N015-62
NCL 435069700
CC 3-3 (Biochemical Genetics)
Section cross-reference(s): 2
FAN.CNT 8

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	US 6238890	B1	20010529	US 1997-918288	19970825	<--
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	CA 2219948	AA	19950824	CA 1995-2219948	19950217	<--
	EP 839831	A2	19980506	EP 1997-122148	19950217	<--
	EP 839831	A3	19990929			
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE					
	JP 11263799	A2	19990928	JP 1998-292659	19950217	<--
	JP 2002060347	A2	20020226	JP 2001-170329	19950217	<--
	CN 1131952	A	19960925	CN 1995-190749	19950801	<--
	US 5958737	A	19990928	US 1997-806772	19970226	<--
	US 6242580	B1	20010605	US 1999-282357	19990331	<--
PRAI	US 1994-199382	B2	19940218	<--		
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	US 1994-310590	B2	19940922	<--		
	US 1994-334628	A2	19941104	<--		
	US 1994-351591	B2	19941207	<--		
	US 1995-475049	B2	19950607	<--		
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	CA 1995-2183564	A3	19950217	<--		
	EP 1995-911043	A3	19950217	<--		
	JP 1995-521944	A3	19950217	<--		
	US 1997-918288	A3	19970825	<--		

AB The DNA encoding single-chain forms of the glycoprotein hormones LH, FSH, TSH, and CG are disclosed. The .alpha. and .beta. subunits of the wild-type heterodimers or their variants or their fragments are covalently linked, optionally through a linker moiety. Some of the single-chain forms are agonists and others antagonists of the glycoprotein hormone activity. The DNA for these fusion proteins are expressed in host cells in order to produce the hormone derivs.
ST sequence human single chain LH FSH TSH CG gene
IT Molecular cloning
(chimeric genes for single-chain forms of glycoprotein hormones and their expression in host cells)
IT Chimeric gene
RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(chimeric genes for single-chain forms of glycoprotein hormones and their expression in host cells)
IT DNA sequences
(of chimeric genes for single-chain forms of human glycoprotein hormones)
IT Protein sequences
(of single-chain forms of human glycoprotein hormones)
IT 342059-62-5
RL: PRP (Properties)
(Unclaimed; chimeric genes for single-chain forms of glycoprotein hormones and their expression in host cells)
IT 9002-61-3, Chorionic gonadotropin 9002-67-9, LH 9002-68-0, FSH 9002-71-5, TSH
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(agonists/antagonists of; chimeric genes for single-chain forms of glycoprotein hormones and their expression in host cells)
IT **342058-60-0P** 342058-62-2P 342058-64-4P 342058-66-6P 342058-68-8P 342058-70-2P 342058-72-4P 342058-74-6P 342058-76-8P 342058-78-0P **342058-80-4P**
RL: BAC (Biological activity or effector, except adverse); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PREP (Preparation)
(amino acid sequence; chimeric genes for single-chain forms of glycoprotein hormones and their expression in host cells)
IT 342058-59-7 342058-61-1 342058-63-3 342058-65-5 342058-67-7 342058-69-9 342058-71-3 342058-73-5 342058-75-7 342058-77-9 342058-79-1
RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)
(nucleotide sequence; chimeric genes for single-chain forms of glycoprotein hormones and their expression in host cells)
IT 342059-32-9, 4: PN: US6238890 SEQID: 4 unclaimed DNA 342059-33-0, 7: PN: US6238890 SEQID: 7 unclaimed DNA 342059-34-1 342059-35-2 342059-36-3 342059-37-4 342059-38-5 342059-39-6 342059-40-9 342059-41-0 342059-42-1 342059-44-3 342059-45-4 342059-47-6 342059-48-7 342059-49-8 342059-50-1 342059-51-2 342059-52-3 342059-53-4 342059-54-5 342059-55-6 342059-56-7 342059-57-8 342059-58-9 342059-59-0 342059-60-3 342059-61-4 342059-63-6 342059-65-8 342059-66-9 342059-67-0 342059-68-1 342059-69-2 342059-70-5 342059-71-6
RL: PRP (Properties)
(unclaimed nucleotide sequence; chimeric genes for single-chain forms of glycoprotein hormones and their expression in host cells)
IT 56832-30-5 56832-34-9 342059-43-2 **342059-46-5** 342059-72-7 342059-73-8 342059-74-9 342059-75-0 342059-76-1 342059-77-2
RL: PRP (Properties)
(unclaimed protein sequence; chimeric genes for single-chain forms of glycoprotein hormones and their expression in host cells)
IT 66090-83-3 110501-42-3 130182-49-9 176861-66-8 204986-86-7 342042-59-5 342042-60-8 342042-61-9 342042-62-0 342042-63-1 342042-64-2 342042-65-3 342042-66-4
RL: PRP (Properties)
(unclaimed sequence; chimeric genes for single-chain forms of glycoprotein hormones and their expression in host cells)
RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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L26 ANSWER 3 OF 11 HCAPLUS COPYRIGHT 2002 ACS
AN 2001:145198 HCAPLUS
DN 134:188974
TI DNA encoding human hybrid heterodimeric proteins for modulation of protein-protein interactions
IN Campbell, Robert K.; Jameson, Bradford A.; Chappel, Scott C.
PA Applied Research Systems ARS Holding N.V., Neth. Antilles
SO U.S., 35 pp., Cont.-in-part of U.S. Ser. No. 804,166.
CODEN: USXXAM
DT Patent
LA English
IC C12P021-04
NCL 435069700
CC 3-2 (Biochemical Genetics)
Section cross-reference(s): 1, 2, 13
FAN.CNT 2

	PATENT NO.	KIND	DATE		APPLICATION NO.	DATE	
PI	US 6194177	B1	20010227		US 1997-910991	19970814	<--
	US 6193972	B1	20010227		US 1997-804166	19970220	<--
	US 2001014333	A1	20010816		US 2001-756186	20010109	<--
PRAI	US 1996-11936P	P	19960220	<--			
	US 1997-804166	A2	19970220	<--			

AB This invention relates to a hybrid protein of two amino acid sequences joined directly or with a peptide linker. Each hybrid protein sequence contains the binding portion of a receptor, such as tumor necrosis factor receptor 1 (TBP1), or a ligand linked to a subunit of a heterodimeric proteinaceous hormone, such as human chorionic gonadotropin (hCG). Each hybrid protein sequence contains a corresponding hormone subunit so as to form a heterodimer upon coexpression. Corresponding DNA mols., expression vectors, host cells, and a method of producing such proteins are claimed. These hybrid proteins could result in monofunctional, bifunctional, or multifunctional mols. for modulating protein-protein interactions, for example by sequestering ligands or regulating receptor activity. Recombinant fusion proteins TBP1-hCG(.alpha./.beta.) were produced, secreted into culture media of transfected mammalian cells, and formed heterodimers. The TBP1-hCG(.alpha./.beta.) proteins inhibited tumor necrosis factor cytotoxicity in a bioassay using the human breast carcinoma cell line BT-20. A plasmid was constructed for expression of the FSH .beta. subunit fused to the extracellular domain of the FSH receptor with a thrombin cleavage site and thrombin receptor extracellular tethering domain.
ST recombinant DNA expression fusion protein heterodimeric receptor ligand hormone; tumor necrosis factor receptor chorionic gonadotropin fusion protein bioassay; plasmid FSH FSHR fusion cleavable peptide linker
IT Animal cell line
(BT20; modulation of protein-protein interactions by human hybrid heterodimeric tumor necrosis factor receptor 1-human chorionic

gonadotropin proteins measured by bioassay)
IT Animal cell line
(CHO; recombinant expression of human hybrid heterodimeric proteins, for modulation of protein-protein interactions)
IT Plasmid vectors
(CMV/FSHR-EC/TR/FSH.beta.; DNA encoding human hybrid heterodimeric proteins for modulation of protein-protein interactions)
IT Animal cell line
(COS-7; recombinant expression of human hybrid heterodimeric proteins, for modulation of protein-protein interactions)
IT Protein receptors
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(DNA encoding human hybrid heterodimeric proteins contg. a protein receptor, for modulation of protein-protein interactions,)
IT Molecular association
Molecular cloning
(DNA encoding human hybrid heterodimeric proteins for modulation of protein-protein interactions)
IT Chimeric gene
Fusion proteins (chimeric proteins)
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(DNA encoding human hybrid heterodimeric proteins for modulation of protein-protein interactions)
IT Primers (nucleic acid)
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); PRP (Properties); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(DNA; PCR primers used for construction of DNA encoding human hybrid heterodimeric proteins for modulation of protein-protein interactions)
IT cDNA sequences
(encoding human hybrid heterodimeric proteins for modulation of protein-protein interactions)
IT FSH receptors
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(extracellular domain; DNA encoding human hybrid heterodimeric proteins contg. FSH receptor, for modulation of protein-protein interactions)
IT Thrombin receptors
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(extracellular domain; DNA encoding human hybrid heterodimeric proteins contg. thrombin receptor, for modulation of protein-protein interactions)
IT Proteins, specific or class
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ligand-binding; DNA encoding human hybrid heterodimeric proteins contg. a ligand-binding protein, for modulation of protein-protein interactions)
IT Proteins, specific or class
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ligands; DNA encoding human hybrid heterodimeric proteins for modulation of protein-protein interactions)
IT Peptides, biological studies
RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)
(linker; DNA encoding human hybrid heterodimeric proteins contg. a linker peptide, for modulation of protein-protein interactions)
IT Cytoprotective agents
Cytotoxicity
(modulation of protein-protein interactions by human hybrid heterodimeric tumor necrosis factor receptor 1-human chorionic gonadotropin proteins measured by bioassay)
IT Protein sequences
(of human hybrid heterodimeric proteins for modulation of protein-protein interactions)

IT Tumor necrosis factor receptors
RL: BAC (Biological activity or effector, except adverse); BPN (Biosynthetic preparation); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PREP (Preparation); PROC (Process)
(p55, fusion products; DNA encoding human hybrid heterodimeric proteins contg. tumor necrosis factor receptor p55, for modulation of protein-protein interactions)

IT Plasmid vectors
(pSVL-based and D.alpha.-based; DNA encoding human hybrid heterodimeric proteins for modulation of protein-protein interactions)

IT DNA
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); PRP (Properties); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(primer; PCR primers used for construction of DNA encoding human hybrid heterodimeric proteins for modulation of protein-protein interactions)

IT Enzymes, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(protein-degrading, proteolytic cleavage site; DNA encoding human hybrid heterodimeric proteins contg. a proteolytic cleavage site, for modulation of protein-protein interactions)

IT Hormones, animal, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(protein; DNA encoding human hybrid heterodimeric proteins, including hormones, for modulation of protein-protein interactions,)

IT Secretion (process)
(protein; modulation of protein-protein interactions by secreted human hybrid heterodimeric tumor necrosis factor receptor 1-human chorionic gonadotropin proteins measured by bioassay)

IT Animal cell line
(recombinant expression of human hybrid heterodimeric proteins, for modulation of protein-protein interactions)

IT 69287-89-4
RL: PRP (Properties)
(Unclaimed; dNA encoding human hybrid heterodimeric proteins for modulation of protein-protein interactions)

IT 195460-68-5P **195460-70-9P** 195460-72-1P **195460-74-3P**
RL: BAC (Biological activity or effector, except adverse); BPN (Biosynthetic preparation); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(amino acid sequence; of human hybrid heterodimeric proteins for modulation of protein-protein interactions)

IT 9002-04-4, Thrombin
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(cleavage site; DNA encoding human hybrid heterodimeric proteins contg. a thrombin cleavage site, for modulation of protein-protein interactions)

IT 195460-69-6 195460-73-2 328049-26-9 328049-27-0
RL: BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nucleotide sequence; DNA encoding human hybrid heterodimeric proteins for modulation of protein-protein interactions)

IT 328053-41-4 328053-42-5 328053-43-6 328053-44-7 328053-45-8
328053-46-9 328053-47-0 328053-48-1 328053-49-2 328053-50-5
328053-51-6 328053-52-7
RL: PRP (Properties)
(unclaimed nucleotide sequence; dNA encoding human hybrid heterodimeric proteins for modulation of protein-protein interactions)

IT 9002-61-3DP, Human chorionic gonadotropin, fusion products

RL: BPN (Biosynthetic preparation); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(.alpha. and .beta. subunits; DNA encoding human hybrid heterodimeric proteins contg. chorionic gonadotropin subunits, for modulation of protein-protein interactions)

IT 9002-68-0D, Follicle stimulating hormone, fusion products
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.beta. subunit; DNA encoding human hybrid heterodimeric proteins contg. FSH, for modulation of protein-protein interactions)

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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L26 ANSWER 4 OF 11 HCAPLUS COPYRIGHT 2002 ACS
AN 1999:670049 HCAPLUS
DN 131:295923
TI Method of promoting hematopoiesis using cyclic peptides derived from human chorionic gonadotropin fragments
IN Gallo, Robert C.; Bryant, Joseph; Lunardi-Iskandar, Yanto
PA University of Maryland Biotechnology Institute, USA
SO U.S., 40 pp., Cont.-in-part of U. S. Ser. No. 669,654, anbandoned.
CODEN: USXXAM
DT Patent
LA English
IC ICM A61K038-12
ICS C07K007-64
NCL 424185100
CC 2-4 (Mammalian Hormones)
Section cross-reference(s): 63

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5968513	A	19991019	US 1996-709924	19960909 <--
	WO 9749418	A1	19971231	WO 1997-US11209	19970624 <--
	W: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GE, GH, HU, IL, IS, JP, KG, KP, KR, KZ, LC, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, SL, TJ, TM, TR, TT, UA, US, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9737924	A1	19980114	AU 1997-37924	19970624 <--
PRAI	US 1996-669654	B2	19960624 <--		
	US 1996-709924	A2	19960909 <--		
	WO 1997-US11209	W	19970624 <--		

AB The present invention relates to methods of treating or preventing diseases or disorders assocd. with hematopoietic deficiency by administration of cyclic peptides derived from human .beta.-human chorionic gonadotropin fragments. The invention also relates to methods of treating or preventing diseases or disorders assocd. with hematopoietic deficiency by administration of hematopoietic cells, the nos. of which have been increased by contacting the cells with human chorionic gonadotropin, .beta.-human chorionic gonadotropin or a peptide contg. a sequence of a portion of .beta.-human chorionic gonadotropin. The

invention also provides assays for the utility of particular human chorionic gonadotropin prepns. in the treatment or prevention of hematopoietic deficiencies or in the increasing of hematopoietic cell nos. in vitro. Pharmaceutical compns. and methods of administration of are also provided.

ST hematopoiesis promotion human chorionic gonadotropin deriv

IT Hematopoietic precursor cell
(method of promoting hematopoiesis by administration of hematopoietic cells, the nos. of which have been increased by contacting the cells with cyclic peptides derived from .beta.-human chorionic gonadotropin fragments)

IT Drug delivery systems
Hematopoiesis
(method of promoting hematopoiesis using cyclic peptides derived from human chorionic gonadotropin fragments)

IT **202016-40-8DP**, fragments, cyclic peptides derived from
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(method of promoting hematopoiesis using cyclic peptides derived from human chorionic gonadotropin fragments)

IT 72979-70-5D, cyclic peptides derived from 163007-06-5D, cyclic peptides derived from 201350-97-2D, cyclic peptides derived from 201351-01-1D, cyclic peptides derived from 201351-02-2D, cyclic peptides derived from 201351-03-3D, cyclic peptides derived from 201351-04-4D, cyclic peptides derived from 201351-05-5D, cyclic peptides derived from 201351-06-6D, cyclic peptides derived from 201351-07-7D, cyclic peptides derived from 201351-09-9D, cyclic peptides derived from 201351-13-5D, cyclic peptides derived from 201351-18-0D, cyclic peptides derived from 201351-19-1D, cyclic peptides derived from 201351-20-4D, cyclic peptides derived from 201351-21-5D, cyclic peptides derived from 201351-22-6D, cyclic peptides derived from 201351-23-7D, cyclic peptides derived from 201351-24-8D, cyclic peptides derived from 201351-55-5 201492-48-0D, cyclic peptides derived from 201492-49-1D, cyclic peptides derived from
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(method of promoting hematopoiesis using cyclic peptides derived from human chorionic gonadotropin fragments)

IT 202017-03-6
RL: PRP (Properties)
(unclaimed nucleotide sequence; method of promoting hematopoiesis using cyclic peptides derived from human chorionic gonadotropin fragments)

RE.CNT 60 THERE ARE 60 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L26 ANSWER 5 OF 11 HCAPLUS COPYRIGHT 2002 ACS
AN 1998:42294 HCAPLUS
DN 128:124125
TI Methods of promoting hematopoiesis using derivatives of human chorionic gonadotropin
IN Gallo, Robert C.; Bryant, Joseph; Lunardi-Iskandar, Yanto
PA University of Maryland Biotechnology Institute, USA; Gallo, Robert C.; Bryant, Joseph; Lunardi-Iskandar, Yanto
SO PCT Int. Appl., 175 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K038-00
ICS C07K001-00; C12N015-00
CC 2-4 (Mammalian Hormones)
Section cross-reference(s): 63
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9749418	A1	19971231	WO 1997-US11209	19970624 <--

W: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GE, GH, HU, IL, IS, JP, KG, KP, KR, KZ, LC, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, SL, TJ, TM, TR, TT, UA, US, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

	US 5968513	A	19991019	US 1996-709924	19960909	<--
	AU 9737924	A1	19980114	AU 1997-37924	19970624	<--
PRAI	US 1996-669654	A2	19960624	<--		
	US 1996-709924	A2	19960909	<--		
	WO 1997-US11209	W	19970624	<--		

AB The present invention relates to methods of treating or preventing diseases or disorders assocd. with hematopoietic deficiency by administration of human chorionic gonadotropin, .beta.-human chorionic gonadotropin, a peptide contg. a sequence of one or more portions of .beta.-human chorionic gonadotropin, or fractions of a source of native human chorionic gonadotropin or native .beta.-human chorionic gonadotropin. The invention also relates to methods of treating and preventing diseases or disorders assocd. with hematopoietic deficiency by administration of hematopoietic cells, the nos. of which have been increased by contacting the cells with a therapeutic of the invention. Pharmaceutical compns. and methods of administration are also provided.

ST hematopoiesis promotion human chorionic gonadotropin deriv

IT Bone marrow
(cells; treating and preventing diseases or disorders assocd. with hematopoietic deficiency by administration of hematopoietic cells whose nos. have been increased by contacting them with derivs. of human chorionic gonadotropin)

IT Fusion proteins (chimeric proteins)
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(contg. .beta.-hCG fragments; methods of promoting hematopoiesis using derivs. of human chorionic gonadotropin)

IT Peptides, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cyclic; methods of promoting hematopoiesis using derivs. of human chorionic gonadotropin)

IT CD4-positive T cell
Simian immunodeficiency virus
(drug screening for human chorionic gonadotropin derivs. with prohematopoietic activity using CD4+ T cells in an SIV infected monkey)

IT Urine
(early pregnancy urine as a source of hCG fractions; methods of promoting hematopoiesis using derivs. of human chorionic gonadotropin)

IT Drug screening
(for pro-hematopoietic activity; methods of promoting hematopoiesis using derivs. of human chorionic gonadotropin)

IT Liquid chromatography
(gel filtration sizing column chromatog. for fractionation of native hCG and native .beta.-hCG; methods of promoting hematopoiesis using derivs. of human chorionic gonadotropin)

IT Purpura (disease)
(idiopathic thrombocytopenic; methods of promoting hematopoiesis using derivs. of human chorionic gonadotropin in patients with HIV infection, idiopathic thrombocytopenic purpura, anemia, or neutropenia)

IT Hematopoiesis
(methods of promoting hematopoiesis using derivs. of human chorionic gonadotropin)

IT Anemia (disease)

Human immunodeficiency virus 1
(methods of promoting hematopoiesis using derivs. of human chorionic gonadotropin in patients with HIV infection, idiopathic thrombocytopenic purpura, anemia, or neutropenia)

IT Antitumor agents
Radiotherapy
(methods of promoting hematopoiesis using derivs. of human chorionic gonadotropin in subjects undergoing chemotherapy or radiation therapy)

IT Drug delivery systems
(methods of promoting hematopoiesis using pharmaceutical formulations contg. derivs. of human chorionic gonadotropin)

IT Agranulocytosis
(neutropenia; methods of promoting hematopoiesis using derivs. of human chorionic gonadotropin in patients with HIV infection, idiopathic thrombocytopenic purpura, anemia, or neutropenia)

IT Fractionation
(of native hCG and native .beta.-hCG; methods of promoting hematopoiesis using derivs. of human chorionic gonadotropin)

IT Embryo, animal
(stem cell; treating and preventing diseases or disorders assocd. with hematopoietic deficiency by administration of hematopoietic cells whose nos. have been increased by contacting them with derivs. of human chorionic gonadotropin)

IT Hematopoietic precursor cell
(stem; treating and preventing diseases or disorders assocd. with hematopoietic deficiency by administration of hematopoietic cells whose nos. have been increased by contacting them with derivs. of human chorionic gonadotropin)

IT Blood cell
(treating and preventing diseases or disorders assocd. with hematopoietic deficiency by administration of hematopoietic cells whose nos. have been increased by contacting them with derivs. of human chorionic gonadotropin)

IT Gene therapy
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(using nucleic acids encoding human chorionic gonadotropin derivs.; methods of promoting hematopoiesis using derivs. of human chorionic gonadotropin)

IT Infection
(viral; methods of promoting hematopoiesis using derivs. of human chorionic gonadotropin in patients with HIV infection, idiopathic thrombocytopenic purpura, anemia, or neutropenia)

IT 9002-61-3P, Human chorionic gonadotropin **202016-40-8P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(methods of promoting hematopoiesis using derivs. of human chorionic gonadotropin)

IT 9002-61-3D, Human chorionic gonadotropin, fragments, analogs, and derivs.
72979-70-5 108303-18-0 108303-18-0D, analogs 163007-06-5
201350-97-2 201351-01-1 201351-02-2 201351-03-3 201351-04-4
201351-05-5 201351-06-6 201351-07-7 201351-09-9 201351-13-5
201351-18-0 201351-19-1 201351-20-4 201351-21-5 201351-22-6
201351-23-7 201351-24-8 201351-26-0 201351-28-2 201351-29-3
201351-30-6 201351-31-7 201351-33-9 201351-34-0 201351-35-1
201351-37-3 201351-38-4 201351-40-8 201351-41-9 201351-55-5
201351-56-6 201351-60-2 201351-70-4 201351-74-8 201351-77-1
201351-82-8 201351-86-2 201351-89-5 201351-92-0 201351-95-3
201351-98-6 201352-01-4 201352-05-8 201352-13-8 201352-16-1
201352-24-1 201352-27-4 201352-30-9 201352-33-2 201352-36-5
201352-37-6 201423-37-2 201423-38-3 201423-40-7 201491-12-5

201492-48-0 201492-49-1 201492-50-4 201492-51-5 **202016-40-8D**
, fragments, analogs, and derivs. 202017-03-6
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(methods of promoting hematopoiesis using derivs. of human chorionic gonadotropin)

L26 ANSWER 6 OF 11 HCAPLUS COPYRIGHT 2002 ACS
AN 1998:42256 HCAPLUS
DN 128:124124
TI Treatment and prevention of HIV infection by administration of derivatives of human chorionic gonadotropin
IN Gallo, Robert C.; Bryant, Joseph; Lunardi-Iskandar, Yanto
PA University of Maryland Biotechnology Institute, USA; Gallo, Robert C.; Bryant, Joseph; Lunardi-Iskandar, Yanto
SO PCT Int. Appl., 173 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K
CC 2-4 (Mammalian Hormones)
Section cross-reference(s): 63
FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9749373	A2	19971231	WO 1997-US11202	19970624 <--
WO 9749373	A3	19980226		
W: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GE, GH, HU, IL, IS, JP, KG, KP, KR, KZ, LC, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, SL, TJ, TM, TR, TT, UA, US, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 6319504	B1	20011120	US 1996-709948	19960909 <--
AU 9738792	A1	19980114	AU 1997-38792	19970624 <--
EP 939589	A2	19990908	EP 1997-936023	19970624 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
PRAI US 1996-669681	A2	19960624 <--		
US 1996-709948	A2	19960909 <--		
WO 1997-US11202	W	19970624 <--		

AB The present invention relates to .beta.-hCG, particularly certain .beta.-hCG peptides, and analogs and derivs. thereof. The invention also relates to fractions of a source of native hCG or native .beta.-hCG, which fractions are active in inhibiting HIV infection or replication, against Kaposi's sarcoma or have a pro-hematopoietic effect. The invention further relates to methods of treatment and prevention of HIV infection by administration of a therapeutic compd. of the invention. Such therapeutic compds. include hCG, .beta.-hCG and .beta.-hCG peptides, analogs and derivs. of hCG, .beta.-hCG and .beta.-hCG peptides, and nucleic acids encoding hCG, .beta.-hCG and .beta.-hCG peptides, and therapeutically and prophylactically effective fractions of sources of native hCG or native .beta.-hCG. Pharmaceutical compns. and methods of administration of therapeutics are also provided.
ST HIV infection treatment beta chorionic gonadotropin
IT Sarcoma
(Kaposi's; treatment of Kaposi's sarcoma by administration of derivs. of human chorionic gonadotropin)
IT Antigens
RL: BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); PROC (Process);

USES (Uses)
(SIV p27; drug screening of .beta.-hCG or its fractions for anti-HIV activity using HIV-1 p24 antigen, HIV-1 LTR, HIV-1 derived RNA transcripts, or SIV p27 antigen)

IT Peptides, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cyclic; treatment and prevention of HIV infection by administration of derivs. of human chorionic gonadotropin)

IT Drug screening
Simian immunodeficiency virus
(drug screening of .beta.-hCG or its fractions for anti-HIV activity using HIV-1 p24 antigen, HIV-1 LTR, HIV-1 derived RNA transcripts, or SIV p27 antigen)

IT mRNA
RL: BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); PROC (Process); USES (Uses)
(drug screening of .beta.-hCG or its fractions for anti-HIV activity using HIV-1 p24 antigen, HIV-1 LTR, HIV-1 derived RNA transcripts, or SIV p27 antigen)

IT Urine
(early pregnancy urine as a source of hCG fractions; treatment and prevention of HIV infection by administration of derivs. of human chorionic gonadotropin)

IT Chemokines
Macrophage inflammatory protein 1.alpha.
Macrophage inflammatory protein 1.beta.
RANTES (chemokine)
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(fusion proteins, with .beta.-hCG fragments; treatment and prevention of HIV infection by administration of derivs. of human chorionic gonadotropin)

IT Liquid chromatography
(gel filtration sizing column chromatog. for fractionation of native hCG and native .beta.-hCG; treatment and prevention of HIV infection by administration of derivs. of human chorionic gonadotropin or nucleic acids encoding the derivs.)

IT Genetic element
RL: BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); PROC (Process); USES (Uses)
(long terminal repeat; drug screening of .beta.-hCG or its fractions for anti-HIV activity using HIV-1 p24 antigen, HIV-1 LTR, HIV-1 derived RNA transcripts, or SIV p27 antigen)

IT Fractionation
(of native hCG and native .beta.-hCG; treatment and prevention of HIV infection by administration of derivs. of human chorionic gonadotropin)

IT Antigens
RL: BPR (Biological process); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); PROC (Process); USES (Uses)
(p24; drug screening of .beta.-hCG or its fractions for anti-HIV activity using HIV-1 p24 antigen, HIV-1 LTR, HIV-1 derived RNA transcripts, or SIV p27 antigen)

IT Hematopoiesis
(pro-hematopoietic activity of derivs. of human chorionic gonadotropin)

IT Antitumor agents
(sarcoma; treatment of Kaposi's sarcoma by administration of derivs. of human chorionic gonadotropin)

IT Antiviral agents
Human immunodeficiency virus 1
(treatment and prevention of HIV infection by administration of derivs. of human chorionic gonadotropin)

IT Gene therapy
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(treatment and prevention of HIV infection by administration of derivs. of human chorionic gonadotropin or nucleic acids encoding the derivs.)

IT Drug delivery systems
(treatment and prevention of HIV infection by administration of formulations contg. derivs. of human chorionic gonadotropin)

IT Fusion proteins (chimeric proteins)
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(.beta.-hCG fragment joined to a protein different from .beta.-hCG; treatment and prevention of HIV infection by administration of derivs. of human chorionic gonadotropin)

IT 9002-61-3P, Human chorionic gonadotropin **202016-40-8P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(treatment and prevention of HIV infection by administration of derivs. of human chorionic gonadotropin)

IT 9002-61-3D, Human chorionic gonadotropin, fragments, analogs, and derivs.
72979-70-5 108303-18-0 108303-18-0D, analogs 163007-06-5
201350-97-2 201351-01-1 201351-02-2 201351-03-3 201351-04-4
201351-05-5 201351-06-6 201351-07-7 201351-09-9 201351-13-5
201351-18-0 201351-19-1 201351-20-4 201351-21-5 201351-22-6
201351-23-7 201351-24-8 201351-26-0 201351-28-2 201351-29-3
201351-30-6 201351-31-7 201351-33-9 201351-34-0 201351-35-1
201351-37-3 201351-38-4 201351-40-8 201351-41-9 201351-55-5
201351-56-6 201351-57-7 201351-58-8 201351-60-2 201351-61-3
201351-64-6 201351-70-4 201351-72-6 201351-73-7 201351-74-8
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201351-88-4 201351-89-5 201351-90-8 201351-91-9 201351-92-0
201351-93-1 201351-94-2 201351-95-3 201351-96-4 201351-97-5
201351-98-6 201351-99-7 201352-00-3 201352-01-4 201352-02-5
201352-03-6 201352-05-8 201352-06-9 201352-07-0 201352-13-8
201352-14-9 201352-15-0 201352-16-1 201352-17-2 201352-18-3
201352-24-1 201352-25-2 201352-26-3 201352-27-4 201352-28-5
201352-29-6 201352-30-9 201352-31-0 201352-32-1 201352-33-2
201352-34-3 201352-35-4 201352-36-5 201352-37-6 201492-48-0,
48-145-Gonadotropin, chorionic (human .beta.-subunit) 201492-49-1,
58-145-Gonadotropin, chorionic (human .beta.-subunit) 201492-51-5
201688-15-5 201688-16-6 **202016-40-8D**, fragments, analogs, and derivs. 202017-03-6
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(treatment and prevention of HIV infection by administration of derivs. of human chorionic gonadotropin)

L26 ANSWER 7 OF 11 HCAPLUS COPYRIGHT 2002 ACS
AN 1997:568294 HCAPLUS
DN 127:244008
TI Recombinant fusion proteins comprising ligand-binding receptor fragment linked with hormone subunit, heterodimer formation, and pharmaceutical uses
IN Campbell, Robert K.; Jameson, Bradford A.; Chappel, Scott C.

PA Applied Research Systems ARS Holding N.V., Neth. Antilles; Campbell, Robert K.; Jameson, Bradford A.; Chappel, Scott C.
SO PCT Int. Appl., 60 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C12N015-62
ICS C12N015-16; C07K014-59; C07K014-715; C07K014-72; C07K016-46; C12N015-85; C12N005-10; A61K038-24
CC 3-2 (Biochemical Genetics)
Section cross-reference(s): 1, 2, 13, 15
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9730161	A1	19970821	WO 1997-US2315	19970220 <--
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	CA 2245877	AA	19970821	CA 1997-2245877	19970220 <--
	AU 9721252	A1	19970902	AU 1997-21252	19970220 <--
	AU 706504	B2	19990617		
	EP 894141	A1	19990203	EP 1997-906604	19970220 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	CN 1212017	A	19990324	CN 1997-192411	19970220 <--
	BR 9707589	A	20000104	BR 1997-7589	19970220 <--
	JP 2000504586	T2	20000418	JP 1997-529498	19970220 <--
	SK 282326	B6	20020107	SK 1998-1148	19970220 <--
	NO 9803799	A	19981019	NO 1998-3799	19980819 <--
PRAI	US 1996-11936P	P	19960220 <--		
	WO 1997-US2315	W	19970220 <--		

AB This invention comprises a hybrid protein including two coexpressed amino acid sequences which form a heterodimer. Each sequence contains the binding portion of a receptor, such as tumor necrosis factor binding protein TBP1 or TBP2, or a ligand, such as interleukin-6, interferon-.beta., or thrombopoietin (TPO), linked to a subunit of a heterodimeric proteinaceous hormone, such as human chorionic gonadotropin. Each coexpressed sequence contains a corresponding hormone subunit so as to form a heterodimer upon expression. Corresponding DNA mols., expression vectors and host cells are also disclosed as are pharmaceutical compns. and a method of producing such proteins. The general method is exemplified by TBP1(20-161) fusion products with human chorionic gonadotropin .alpha. subunit coexpression with TBP1(20-161) fusion products with human chorionic gonadotropin .beta. subunit. The hybrid proteins were coexpressed by COS-7 cells, formed heterodimers, and protected BT-20 cells against TNF.alpha.-induced cytotoxicity.

ST receptor fusion hormone subunit recombinant heterodimer; ligand fusion hormone subunit recombinant heterodimer; chorionic gonadotropin subunit fusion TBP protein; TNF binding protein fusion hormone subunit; tumor necrosis factor binding protein fusion; ovary follicle cell maturation induction recombinant

IT Animal cell line
(CHO, expression host; recombinant fusion proteins comprising ligand-binding receptor fragment linked with hormone subunit, heterodimer formation, and pharmaceutical uses)

IT Animal cell line
(COS-7, expression host; recombinant fusion proteins comprising ligand-binding receptor fragment linked with hormone subunit,

heterodimer formation, and pharmaceutical uses)

IT Plasmid vectors
(D.alpha.-TBP190hCG.alpha.; recombinant fusion proteins comprising ligand-binding receptor fragment linked with hormone subunit, heterodimer formation, and pharmaceutical uses)

IT Plasmid vectors
(D.alpha.-TBP190hCG.beta.; recombinant fusion proteins comprising ligand-binding receptor fragment linked with hormone subunit, heterodimer formation, and pharmaceutical uses)

IT Proteins, specific or class
RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(TBP1 (tumor necrosis factor binding protein 1), fusion products, with hormone subunit; recombinant fusion proteins comprising ligand-binding receptor fragment linked with hormone subunit, heterodimer formation, and pharmaceutical uses)

IT Proteins, specific or class
RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(TBP2 (tumor necrosis factor binding protein 2), fusion products, with hormone subunit; recombinant fusion proteins comprising ligand-binding receptor fragment linked with hormone subunit, heterodimer formation, and pharmaceutical uses)

IT Chimeric gene
Chimeric gene
RL: BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(animal; recombinant fusion proteins comprising ligand-binding receptor fragment linked with hormone subunit, heterodimer formation, and pharmaceutical uses)

IT Gene, animal
Gene, animal
RL: BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(chimeric; recombinant fusion proteins comprising ligand-binding receptor fragment linked with hormone subunit, heterodimer formation, and pharmaceutical uses)

IT Animal cell
(expression host; recombinant fusion proteins comprising ligand-binding receptor fragment linked with hormone subunit, heterodimer formation, and pharmaceutical uses)

IT Ovary
(follicle cell, maturation induction; recombinant fusion proteins comprising ligand-binding receptor fragment linked with hormone subunit, heterodimer formation, and pharmaceutical uses)

IT Interleukin 6
RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(fusion products, with hormone receptor; recombinant fusion proteins comprising ligand-binding receptor fragment linked with hormone subunit, heterodimer formation, and pharmaceutical uses)

IT Ligands
Receptors
RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(fusion products, with hormone subunit; recombinant fusion proteins comprising ligand-binding receptor fragment linked with hormone subunit, heterodimer formation, and pharmaceutical uses)

IT Antibodies
FSH receptors
Gonadotropin receptors
RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(fusion products; recombinant fusion proteins comprising ligand-binding receptor fragment linked with hormone subunit, heterodimer formation, and pharmaceutical uses)

IT Molecular association
(in heterodimer formation; recombinant fusion proteins comprising ligand-binding receptor fragment linked with hormone subunit, heterodimer formation, and pharmaceutical uses)

IT Peptides, biological studies
RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(linker, contg. enzyme cleavage site; recombinant fusion proteins comprising ligand-binding receptor fragment linked with hormone subunit, heterodimer formation, and pharmaceutical uses)

IT Tumor necrosis factor receptors
RL: BAC (Biological activity or effector, except adverse); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(p55, fusion products, with human chorionic gonadotropin; recombinant fusion proteins comprising ligand-binding receptor fragment linked with hormone subunit, heterodimer formation, and pharmaceutical uses)

IT Plasmid vectors
(pSVL-hTBP1.hCG.alpha.; recombinant fusion proteins comprising ligand-binding receptor fragment linked with hormone subunit, heterodimer formation, and pharmaceutical uses)

IT Plasmid vectors
(pSVL-hTBPhCG.beta.; recombinant fusion proteins comprising ligand-binding receptor fragment linked with hormone subunit, heterodimer formation, and pharmaceutical uses)

IT Enzymes, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(peptide linker contg. enzyme cleavage site; recombinant fusion proteins comprising ligand-binding receptor fragment linked with hormone subunit, heterodimer formation, and pharmaceutical uses)

IT Ovary
(peptide linker contg. ovary enzyme cleavage site; recombinant fusion proteins comprising ligand-binding receptor fragment linked with hormone subunit, heterodimer formation, and pharmaceutical uses)

IT Tumor necrosis factors
RL: ADV (Adverse effect, including toxicity); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(protection against cytotoxicity of; recombinant fusion proteins comprising ligand-binding receptor fragment linked with hormone subunit, heterodimer formation, and pharmaceutical uses)

IT DNA sequences
Drugs
Genetic vectors
Molecular cloning
Plasmid vectors
Protein sequences
(recombinant fusion proteins comprising ligand-binding receptor fragment linked with hormone subunit, heterodimer formation, and pharmaceutical uses)

IT Fusion proteins (chimeric proteins)
RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(recombinant fusion proteins comprising ligand-binding receptor fragment linked with hormone subunit, heterodimer formation, and pharmaceutical uses)

IT Hormones, animal, biological studies
RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(subunit, fusion products; recombinant fusion proteins comprising ligand-binding receptor fragment linked with hormone subunit, heterodimer formation, and pharmaceutical uses)

IT Interferon receptors
RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(.alpha.-interferon, fusion products; recombinant fusion proteins comprising ligand-binding receptor fragment linked with hormone subunit, heterodimer formation, and pharmaceutical uses)

IT Interferons
RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(.beta., fusion products, with hormone receptor; recombinant fusion proteins comprising ligand-binding receptor fragment linked with hormone subunit, heterodimer formation, and pharmaceutical uses)

IT Interferon receptors
RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(.beta., fusion products; recombinant fusion proteins comprising ligand-binding receptor fragment linked with hormone subunit, heterodimer formation, and pharmaceutical uses)

IT Interferon receptors
RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(.gamma.-interferon, fusion products; recombinant fusion proteins comprising ligand-binding receptor fragment linked with hormone subunit, heterodimer formation, and pharmaceutical uses)

IT 195460-68-5P **195460-70-9P** 195460-72-1P **195460-74-3P**
RL: BAC (Biological activity or effector, except adverse); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(amino acid sequence; recombinant fusion proteins comprising ligand-binding receptor fragment linked with hormone subunit, heterodimer formation, and pharmaceutical uses)

IT 195460-67-4 195460-69-6 195460-71-0 195460-73-2
RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(nucleotide sequence; recombinant fusion proteins comprising ligand-binding receptor fragment linked with hormone subunit, heterodimer formation, and pharmaceutical uses)

IT 9002-04-4, Thrombin
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(peptide linker contg. thrombin cleavage site; recombinant fusion proteins comprising ligand-binding receptor fragment linked with hormone subunit, heterodimer formation, and pharmaceutical uses)

IT 9002-61-3DP, Human chorionic gonadotropin, subunit, fusion products
RL: BAC (Biological activity or effector, except adverse); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(recombinant fusion proteins comprising ligand-binding receptor fragment linked with hormone subunit, heterodimer formation, and pharmaceutical uses)

IT 9002-67-9DP, Luteinizing hormone, subunit, fusion products 9002-68-0DP, Follicle stimulating hormone, subunit, fusion products 9002-71-5DP, Tsh hormone, subunit, fusion products 9014-42-0DP, Thrombopoietin, fusion products, with hormone receptor 57285-09-3DP, Inhibin, subunit, fusion products
RL: BPN (Biosynthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(recombinant fusion proteins comprising ligand-binding receptor

fragment linked with hormone subunit, heterodimer formation, and pharmaceutical uses)

L26 ANSWER 8 OF 11 HCAPLUS COPYRIGHT 2002 ACS
AN 1992:208630 HCAPLUS
DN 116:208630
TI Analogs of glycoprotein hormones having altered immunological characteristics, efficacy and/or receptor specificity
IN Campbell, Robert K.; Moyle, William R.
PA University of Medicine and Dentistry of New Jersey, USA
SO PCT Int. Appl., 93 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K037-38
ICS A61K037-24
CC 2-4 (Mammalian Hormones)
Section cross-reference(s): 3
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 9116922	A1	19911114	WO 1991-US3162	19910507	<--
	W: CA, JP, US					
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE					
	EP 531407	A1	19930317	EP 1991-910478	19910507	<--
	EP 531407	B1	20000209			
	R: CH, DE, FR, GB, IT, LI					
	JP 05508400	T2	19931125	JP 1991-510179	19910507	<--
PRAI	US 1990-520703		19900508	<--		
	WO 1991-US3162		19910507	<--		

AB Chimeric chorionic gonadotropin (CG) heterodimeric polypeptides are provided which have different properties compared to native human CG (hCG). Certain heterodimeric polypeptides bind to LH (LH) and FSH receptors and stimulate steroidogenesis in testicular and ovarian cells. Other heterodimeric polypeptides bind to LH receptors but have lower efficacy than hCG in stimulation of steroidogenesis in testicular and ovarian cells. Prodn. of the chimeric analogs by recombinant techniques is described, and sequences of chimeras are included. The steroidogenesis potency of the analogs was strongly related to receptor binding activity. One analog had reduced efficacy, relative to hCG, for LH receptor-mediated cAMP accumulation; the analog also inhibited the ability of hCG to stimulate hCG-induced cAMP accumulation.
ST glycoprotein chimeric hormone analog; human chorionic gonadotropin chimeric analog; steroidogenesis chorionic gonadotropin analog; cyclic AMP chorionic gonadotropin analog; cloning chorionic gonadotropin analog cDNA
IT Gene, animal
RL: BIOL (Biological study)
(cDNA, for chimeric chorionic gonadotropin .alpha. and .beta. subunits of human, expression in mammalian cells of)
IT Cattle
Fish
Horse
Sheep
(chimeric heterodimeric glycoprotein hormone with sequences of human and)
IT Deoxyribonucleic acid sequences
(of chimeric chorionic gonadotropin .alpha. and .beta. subunit cDNAs of human)
IT Molecular cloning
(of chimeric chorionic gonadotropin .alpha. and .beta. subunit cDNAs of human, in mammalian cells)
IT Protein sequences
(of chimeric chorionic gonadotropin .alpha. and .beta. subunits of

human)
IT Plasmid and Episome
(pBMT2X-hCG-alpha, chimeric human chorionic gonadotropin .beta. subunit cDNA on, expression in mammalian cells of)
IT Plasmid and Episome
(pBMT2X-hCG-beta, for chimeric human chorionic gonadotropin .beta. subunit cDNA on, expression in mammalian cells of)
IT Plasmid and Episome
(pBNT2X-F8, chimeric human chorionic gonadotropin .beta. subunit cDNA on, expression in mammalian cells of)
IT Plasmid and Episome
(pCM-hCG-beta, chimeric human chorionic gonadotropin .beta. subunit cDNA on, expression in mammalian cells of)
IT Plasmid and Episome
(pCM-beta-J2, chimeric human chorionic gonadotropin .beta. subunit cDNA on, expression in mammalian cells of)
IT Plasmid and Episome
(pKBM-hCG-alpha, human chorionic gonadotropin .alpha. subunit cDNA on, chimeric .alpha. subunits manuf. in relation to)
IT Plasmid and Episome
(pKBM-hCG-beta, human chorionic gonadotropin .beta. subunit cDNA on, chimeric .beta. subunits manuf. in relation to)
IT Plasmid and Episome
(pKBM-hCG-beta', human chorionic gonadotropin .beta. subunit cDNA on, chimeric .beta. subunits manuf. in relation to)
IT Plasmid and Episome
(pSVL-B11, chimeric human chorionic gonadotropin .beta. subunit cDNA on, expression in mammalian cells of)
IT Plasmid and Episome
(pSVL-B9, chimeric human chorionic gonadotropin .beta. subunit cDNA on, expression in mammalian cells of)
IT Plasmid and Episome
(pSVL-F8, chimeric human chorionic gonadotropin .beta. subunit cDNA on, expression in mammalian cells of)
IT Plasmid and Episome
(pSVL-H3, chimeric human chorionic gonadotropin .alpha. subunit cDNA on, expression in mammalian cells of)
IT Plasmid and Episome
(pSVL-H6, chimeric human chorionic gonadotropin .alpha. subunit cDNA on, expression in mammalian cells of)
IT Plasmid and Episome
(pSVL-hCG-alpha, human chorionic gonadotropin .alpha. subunit cDNA on, chimeric .alpha. subunits manuf. in relation to)
IT Plasmid and Episome
(pSVL-hCG-beta, human chorionic gonadotropin .beta. subunit cDNA on, chimeric .beta. subunits manuf. in relation to)
IT Animal cell line
(C-127, expression in, of chimeric human chorionic gonadotropin .alpha. and .beta. subunit cDNAs)
IT Animal cell line
(COS, expression in, of chimeric human chorionic gonadotropin .alpha. and .beta. subunit cDNAs)
IT Animal cell line
(COS-7, expression in, of chimeric human chorionic gonadotropin .alpha. and .beta. subunit cDNAs)
IT Deoxyribonucleic acids
RL: BIOL (Biological study)
(complementary, for chimeric chorionic gonadotropin .alpha. and .beta. subunits of human, expression in mammalian cells of)
IT Glycoproteins, specific or class
RL: BIOL (Biological study)
(spike, G, fusion protein with human chorionic gonadotropin .beta.-chain fragment of, of vesicular stomatitis virus, prodn. in

COS-7 cells of)
IT Virus, animal
(vesicular stomatitis, G protein of, fusion products with human chorionic gonadotropin .beta.-chain fragment, prodn. in COS-7 cells of)
IT 140933-23-9 140933-24-0 140933-25-1 140933-26-2 140933-28-4 140933-29-5 140933-31-9
RL: PRP (Properties)
(amino acid sequence of, complete, and monoclonal antibody binding activity of)
IT 140933-32-0D, fusion products with vesicular stomatitis virus G protein
RL: PRP (Properties)
(amino acid sequence of, complete, and monoclonal antibody binding to cell expressing)
IT 140933-27-3
RL: PRP (Properties)
(amino acid sequence of, complete, chimeric chorionic gonadotropin heterodimer manuf. in relation to)
IT 140933-02-4 140933-04-6 140933-06-8 140933-07-9 140933-08-0 140933-09-1 140933-10-4 140933-11-5 140933-12-6
RL: PRP (Properties)
(amino acid sequence of, complete, receptor binding of)
IT 140933-21-7P 140933-22-8P 140933-30-8P
RL: PRP (Properties); PREP (Preparation)
(amino acid sequence of, complete, recombinant prodn. and altered activity of)
IT 140933-03-5P 140933-13-7P
RL: PRP (Properties); PREP (Preparation)
(amino acid sequence of, complete, recombinant prodn. and receptor binding of)
IT 140933-85-3, Deoxyribonucleic acid (ox prechorionic gonadotropin .alpha.-subunit-specifying plus 5'- and 3'-flanking region fragment)
RL: PRP (Properties)
(nucleotide sequence of, chimeric chorionic gonadotropin heterodimer manuf. in relation to)
IT 140933-84-2, Deoxyribonucleic acid (ox prechorionic gonadotropin .alpha.-subunit-specifying)
RL: PRP (Properties)
(nucleotide sequence of, complete, chimeric chorionic gonadotropin heterodimer manuf. in relation to)
IT 140933-68-2, Deoxyribonucleic acid (human prechorionic gonadotropin .beta.-subunit-specifying)
RL: PRP (Properties)
(nucleotide sequence of, complete, chimeric .beta.-chain cDNA prepn. using)
IT 140933-33-1 140933-66-0 140933-67-1
RL: PRP (Properties)
(nucleotide sequence of, complete, recombinant heterodimeric chorionic gonadotropin manuf. in relation to)
IT **76050-53-8** 79030-14-1
RL: BIOL (Biological study)
(recombinant chimeric chorionic gonadotropin heterodimers prepn. using)
IT 9002-61-3D, Chorionic gonadotropin, .beta. subunit fragment, fusion products with FSH or TSH fragment 9002-68-0D, Follicle-stimulating hormone, .beta. subunit fragment, fusion products with chorionic gonadotropin .beta. subunit fragment 9002-71-5D, Thyroid-stimulating hormone, .beta. subunit fragment, fusion products with chorionic gonadotropin .beta. subunit fragment
RL: BIOL (Biological study)
(recombinant, altered receptor binding of)

L26 ANSWER 9 OF 11 HCAPLUS COPYRIGHT 2002 ACS
AN 1984:97541 HCAPLUS
DN 100:97541

TI Evolution of the genes for the .beta. subunits of human chorionic gonadotropin and luteinizing hormone
AU Talmadge, Karen; Vamvakopoulos, Nikos C.; Fiddes, John C.
CS Cold Spring Harbor Lab., Cold Spring Harbor, NY, 11724, USA
SO Nature (London) (**1984**), 307(5946), 37-40
CODEN: NATUAS; ISSN: 0028-0836
DT Journal
LA English
CC 3-3 (Biochemical Genetics)
Section cross-reference(s): 2, 13
AB Nucleotide sequence comparisons of the single gene for the human LH [9002-67-9] gene .beta.-subunit with 2 of the 7 genes for the human chorionic gonadotropin [9002-61-3] .beta.-subunit suggest that the .beta. human chorionic gonadotropin genes have evolved from an ancestral .beta. LH gene by a series of selected changes with very little neutral drift. Moreover, the 24-amino acid C-terminal extension of the human chorionic gonadotropin .beta.-subunit appears to have arisen by a single base deletion that incorporated the 3'-untranslated region of the ancestral .beta. LH gene into the coding region.
ST chorionic gonadotropin LH gene human evolution
IT Gene and Genetic element, animal
RL: PROC (Process)
(for chorionic gonadotropin and LH .beta.-subunits, of human, structure and evolution of)
IT Protein sequences
(of LH .beta.-subunit, of human, complete)
IT Evolution
(of chorionic gonadotropin and LH .beta.-subunit genes, of human)
IT Protein sequences
(of chorionic gonadotropin .beta.-subunit precursor, of human, complete)
IT Protein sequences
(of chorionic gonadotropin .beta.-subunit, of human, complete)
IT Deoxyribonucleic acid sequences
(LH .beta.-subunit-specifying, of human, complete)
IT Deoxyribonucleic acid sequences
(chorionic gonadotropin .beta.-subunit-specifying, of human, complete)
IT 53664-53-2 56832-34-9 **76050-53-8** 87971-06-0 87971-07-1 89072-90-2
RL: PRP (Properties)
(amino acid sequence of)
IT 9002-61-3 9002-67-9
RL: PRP (Properties)
(gene for .beta.-subunit of, of human, structure and evolution of)
IT 89072-67-3 89072-68-4 89072-69-5
RL: PRP (Properties); BIOL (Biological study)
(nucleotide sequence of)

L26 ANSWER 10 OF 11 HCAPLUS COPYRIGHT 2002 ACS
AN 1983:607297 HCAPLUS
DN 99:207297
TI The .beta. subunit of human chorionic gonadotropin is encoded by multiple genes
AU Policastro, Paul; Ovitt, Catherine E.; Hoshina, Makoto; Fukuoka, Hideoki; Boothby, Mark R.; Boime, Irving
CS Sch. Med., Washington Univ., St. Louis, MO, 63110, USA
SO J. Biol. Chem. (**1983**), 258(19), 11492-9
CODEN: JBCHA3; ISSN: 0021-9258
DT Journal
LA English
CC 3-3 (Biochemical Genetics)
Section cross-reference(s): 2, 13
AB Two recombinant phage clones bearing sequences corresponding to the .beta.

subunit of human chorionic gonadotropin (hCG.beta.) [9002-61-3] were isolated from a human genomic library. The .beta. sequences were mapped by blot hybridization of restriction digests of these phage DNAs and the nonoverlapping inserts were subcloned in plasmid pBR322 and sequenced. The nucleotide-sequencing data show that the hCG.beta. subunit is encoded by .gtoreq.3 nonallelic genes. Moreover, restriction analyses of human placental DNA indicated that these genes may be linked in a single cluster with 4 other hCG.beta.-like genes. The sequenced genes all differ in their 5' flanking regions, and none of them is completely homologous in sequence to either of the 2 hCG.beta. clones used here. In the translated region of 1 of these genes, 3 base substitutions result in 2 changes from the reported amino acid sequence. In the family of .beta.-contg. glycoprotein hormones, the hCG.beta. subunits is unique in that it contains an extension of 29 amino acids at its C-terminus. The DNA sequence corresponding to this region in the sequenced genes is part of a larger exon. The C-terminal extension does not result from splicing of the primary RNA transcript.

ST human chorionic gonadotropin beta subunit; gene human chorionic gonadotropin subunit; sequence human chorionic gonadotropin subunit

IT Gene and Genetic element, animal
RL: BIOL (Biological study)
(for chorionic gonadotropin .beta. subunit, of human, multiple)

IT Protein sequences
(of chorionic gonadotropin .beta. subunit precursor, of human multiple clones, complete)

IT Protein sequences
(of chorionic gonadotropin .beta. subunit, of human multiple clones, complete)

IT Deoxyribonucleic acid sequences
(chorionic gonadotropin .beta.-subunit-specifying, of human genomic multiple clones, complete)

IT 56832-34-9 **76050-53-8** 87971-06-0 87971-07-1
RL: PRP (Properties)
(amino acid sequence of)

IT 76012-21-0 87970-97-6
RL: PRP (Properties); BIOL (Biological study)
(nucleotide sequence of)

IT 9002-61-3
RL: PRP (Properties)
(.beta. subunit of, of human, multiple genes for)

L26 ANSWER 11 OF 11 HCAPLUS COPYRIGHT 2002 ACS
AN 1981:11741 HCAPLUS
DN 94:11741
TI The cDNA for the .beta.-subunit of human chorionic gonadotropin suggests evolution of a gene by readthrough into the 3'-untranslated region
AU Fiddes, John C.; Goodman, Howard M.
CS Howard Hughes Med. Inst. Lab., Univ. California, San Francisco, CA, 94143, USA
SO Nature (London) (**1980**), 286(5774), 684-7
CODEN: NATUAS; ISSN: 0028-0836
DT Journal
LA English
CC 6-2 (General Biochemistry)
AB A 579-base pair approx. full-length complementary DNA (cDNA) coding for the 145-amino acid long .beta.-subunit of human chorionic gonadotropin (I) was cloned in the plasmid vector pBR322 and its complete nucleotide sequence detd. A hydrophobic presequence of 20 amino acids was identified from the nucleotide sequence. The amino acid sequence of the .beta.-subunit of I contained a C-terminal extension of .apprx.30 amino acids which has no homologous counterpart in LH, FSH, and TSH, although the amino acid sequence of the .beta.-subunit is related to those of the .beta.-subunits of LH, FSH, and TSH. Anal. of the nucleotide sequence of

.beta.-subunit of I cDNA suggested that this extension may have arisen by the loss of the termination codon of an ancestral .beta.-like gene so that most of what was previously the 3'-untranslated region now codes for protein. The .beta.-subunit of I terminated with the codon UAA located 16 bases before the poly(A) in the sequence AAUAAA. This sequence may be a recognition signal involved in either polyadenylation or processing and therefore may have a dual role in this gene, serving both a coding and regulatory function.

ST chorionic gonadotropin beta subunit gene; evolution gene chorionic gonadotropin subunit; nucleotide sequence chorionic gonadotropin gene; complementary DNA chorionic gonadotropin sequence

IT Peptides, properties
RL: PRP (Properties)
(amino acid sequence of, of chorionic gonadotropin (human .beta.-subunit precursor reduced))

IT Gene
RL: BIOL (Biological study)
(for chorionic gonadotropin .beta.-subunit of human, evolution of, complementary DNA nucleotide sequence in relation to)

IT Molecular structure, natural product
(of DNA (human chorionic gonadotropin .beta.-subunit precursor complementary))

IT Molecular structure, natural product
(of chorionic gonadotropin (human .beta.-subunit precursor reduced))

IT Evolution
(of chorionic gonadotropin .beta.-subunit gene, nucleotide sequence of complementary DNA in relation to)

IT Nucleotides, properties
RL: PRP (Properties)
(sequence of, of complementary DNA for .beta.-subunit of human chorionic gonadotropin)

IT Deoxyribonucleic acids
RL: BIOL (Biological study)
(complementary, for chorionic gonadotropin .beta.-subunit of human, nucleotide sequence of, gene evolution in relation to)

IT **76050-53-8**
RL: PRP (Properties)
(amino acid sequence of)

IT 56832-34-9
RL: BIOL (Biological study)
(complementary DNA for .beta.-subunit of, nucleotide sequence of, gene evolution in relation to)

IT 76012-21-0
RL: PRP (Properties)
(nucleotide sequence of)

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L24 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2002 ACS
AN 1999:223048 HCAPLUS
DN 130:247459
TI Mutants of thyroid stimulating hormone subunits with improved bioactivity and stability
IN Weintraub, Bruce D.; Szkudlinski, Mariusz W.
PA University of Maryland, Baltimore, USA
SO PCT Int. Appl., 44 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C12N015-16
ICS C07K014-59; A61K038-24; G01N033-68
CC 2-7 (Mammalian Hormones)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 9915665	A2	19990401	WO 1998-US19772	19980922	
	WO 9915665	A3	19990520			
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG					
	CA 2302993	AA	19990401	CA 1998-2302993	19980922	
	AU 9894998	A1	19990412	AU 1998-94998	19980922	
	EP 1017817	A2	20000712	EP 1998-948422	19980922	
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI					
	JP 2001517445	T2	20011009	JP 2000-512957	19980922	
	WO 2000017360	A1	20000330	WO 1999-US5908	19990319	<--
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG					
	AU 9931906	A1	20000410	AU 1999-31906	19990319	<--
	EP 1115866	A1	20010718	EP 1999-913947	19990319	<--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI					
PRAI	US 1997-939472	A2	19970922			
	WO 1998-US19772	W	19980922			
	WO 1999-US5908	W	19990319	<--		

AB The present invention is based upon the discovery that mutant .alpha. subunits and mutant .beta. subunits each comprising amino acid substitutions relative to the wild type can be produced and assembled to form a mutant TSH heterodimer or TSH analog that possesses higher bioactivity in vitro and longer half life in vivo. A preferred mutant .alpha. subunit (to be used in conjunction with a modification to increase the serum half-life of the TSH heterodimer having the mutant .alpha. subunit) comprises four mutations: Q13K, E14K, P16K, and Q20K; a preferred mutant .beta. subunit comprises three mutations: I58R, E63R, and L69R. Multiple mutations within a subunit and modifications to increase the half-life of the TSH heterodimer (i.e., .beta.-subunit fusion with the C-terminal extension peptide of human chorionic gonadotropin and/or a .beta. subunit-.alpha. subunit fusion) can act synergistically to achieve bioactivity that is greater than the sum of the increase of the mutations and the long acting modifications. Accordingly, the present invention provides methods for using mutant TSH heterodimers, TSH analogs, fragments, and derivs. thereof for treating or preventing diseases of the thyroid, in particular thyroid cancer. The invention also relates to methods of diagnosis, prognosis and monitoring for thyroid-related functions. Pharmaceutical and diagnostic compns., methods of using mutant TSH heterodimers and TSH analogs with utility for treatment and prevention of metabolic and reproductive diseases are also provided.

ST TSH mutagenesis bioactivity stability

IT Diagnosis
(cancer; mutants of human TSH subunits with improved bioactivity and stability)

IT Antibodies

RL: ANT (Analyte); ANST (Analytical study)
(diagnosis of antibodies against TSH receptor in Graves' disease; mutants of human TSH subunits with improved bioactivity and stability)

IT Thyrotropin receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(diagnosis of antibodies against TSH receptor in Graves' disease; mutants of human TSH subunits with improved bioactivity and stability)

IT Graves' disease
(diagnosis of; mutants of human TSH subunits with improved bioactivity and stability)

IT Neoplasm
(diagnosis; mutants of human TSH subunits with improved bioactivity and stability)

IT Test kits
(for diagnosis of Graves' disease; mutants of human TSH subunits with improved bioactivity and stability)

IT Thyroid gland, neoplasm
Thyroid gland, neoplasm
(inhibitors; mutants of human TSH subunits with improved bioactivity and stability)

IT Diagnosis
(mol.; mutants of human TSH subunits with improved bioactivity and stability)

IT Mutagenesis
Protein engineering
(mutants of human TSH subunits with improved bioactivity and stability)

IT Protein sequences
(of mutants of human TSH subunits with improved bioactivity and stability)

IT Antitumor agents
Antitumor agents
(thyroid; mutants of human TSH subunits with improved bioactivity and stability)

IT Hypothyroidism
(treatment of; mutants of human TSH subunits with improved bioactivity and stability)

IT 9002-71-5DP, Thyroid stimulating hormone, mutants 56832-30-5DP, mutants 64365-92-0DP, Thyrotropin (human .beta.-subunit protein moiety reduced), mutants 221650-43-7P 221650-44-8P 221650-45-9P 221650-46-0P 221650-47-1P 221650-48-2P 221650-49-3P 221650-50-6P 221650-51-7P 221650-52-8P 221650-53-9P
RL: BAC (Biological activity or effector, except adverse); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PREP (Preparation)
(mutants of human TSH subunits with improved bioactivity and stability)